

RESPONSE UNDER 37 C.F.R. §1.111

Application Number: 10/568,505

Attorney Docket Number: 108421-00127

AMENDMENTS TO THE CLAIMS

1. (Withdrawn) A purification catalyst for exhaust gas, comprising an aluminum oxide supporting a Pd oxide, wherein the aluminum oxide is LnAlO_3 in which Ln is a rare-earth element, and wherein crystal system of the aluminum oxide is trigonal or rhombohedral.
2. (Cancelled)
3. (Withdrawn) The purification catalyst for exhaust gas of claim 1, wherein the Pd oxide contains at least Ln_2PdO_4 in which Ln is a rare-earth element.
4. (Withdrawn) The purification catalyst for exhaust gas according to claim 1, wherein the catalyst is produced by adding at least one kind of compound selected from the group of compounds of carboxylic acid having a hydroxyl group or a mercapto group and having a carbon number of 2 to 20, dicarboxylic acid having a carbon number of 2 or 3, and monocarboxylic acid having a carbon number of 1 to 20 to aqueous nitrate solution including a component.
5. (Withdrawn) The purification catalyst for exhaust gas according to claim 4, wherein the catalyst is produced by evaporating the aqueous nitrate solution completely, to produce a carboxylic acid complex polymer and by heating the carboxylic acid complex polymer.

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6. (Currently Amended) A method for production of a purification catalyst for exhaust gas, wherein the purification catalyst comprises a Pd oxide consisting of containing at least Ln_2PdO_4 supported by LnAlO_3 , wherein Ln is a rare-earth element, the method comprising:

preparing providing at least one compound selected from the group consisting of compounds of carboxylic acid having a hydroxyl group or a mercapto group and having a carbon number of 2 to 20, dicarboxylic acid having a carbon number of 2 or 3, and monocarboxylic acid having a carbon number of 1 to 20; and

adding said at least one compound to an aqueous nitrate solution including Ln and Pd and an aqueous nitrate solution including Ln and Al.

7. (Currently Amended) The method for production of a purification catalyst for exhaust gas according to claim 6, the method further comprising:

evaporating the aqueous carboxylic-acid nitrate solution completely to produce a carboxylic acid complex polymer; and

heating said carboxylic acid complex polymer.

8. (Previously Presented) The method for production of a purification catalyst for exhaust gas according to claim 7, wherein a heating temperature in said heating of the carboxylic acid complex polymer step is not more than 1000°C.

9. (Withdrawn) A purification catalyst apparatus for automobile exhaust gas having Pd oxide supported on Al oxide for purifying exhaust gas emitted from an automobile,

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wherein the Al oxide is LnAlO_3 in which Ln is a rare-earth element, and wherein crystal system of the aluminum oxide is trigonal or rhombohedral.